

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Withdrawn) A method for identifying a compound which inhibits HIV replication, said method comprising:

contacting a cell with a test compound, wherein HIV virion production is dependent on Rev protein expression in said cell; and

measuring HIV replication in said cell treated with a test compound, wherein a lower level of HIV replication in said cell, compared with HIV replication levels in an otherwise identical cell not contacted with said test compound, or compared with HIV replication levels in a cell which produces HIV virions independent of Rev protein expression contacted with said test compound, is an indication that said test compound is a compound which inhibits HIV replication;

thereby identifying a compound which inhibits HIV replication.

2. (Withdrawn) The method of claim 1, wherein said cell in which HIV virion production is dependent on Rev protein expression, produces non-infectious HIV virions.

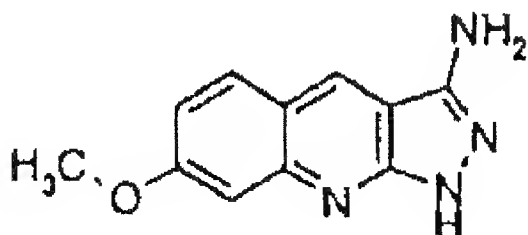
3. (Withdrawn) The method of claim 2, wherein said cell is a 5BD.1 cell or a 5BA.1 cell.

4. (Withdrawn) The method of claim 1, wherein said cell which produces HIV virions independent of Rev protein expression is a 2A.22 cell.

5. (Withdrawn) The method of claim 1, wherein said method of measuring HIV replication is an ELISA assay.

6. (Withdrawn) The method of claim 5, wherein said ELISA assay measures the protein- p24.

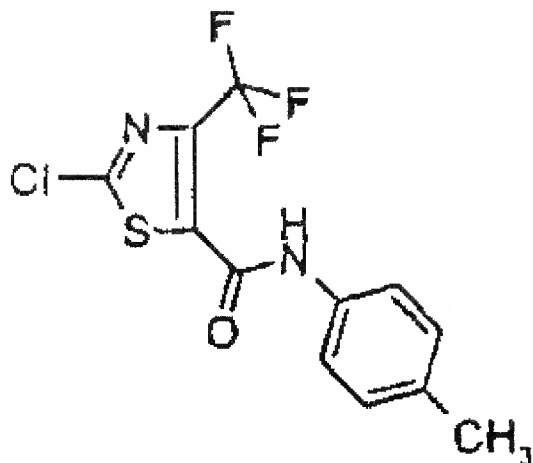
7. (Withdrawn) The method of claim 1, wherein said method of measuring HIV replication is based on expression of a reporter gene which is expressed when HIV-1 Rev protein is expressed.
8. (Withdrawn) The method of claim 1, wherein said method identifies an inhibitor of Rev activity or function.
9. (Withdrawn) A compound identified by the method of claim 1.
10. (Withdrawn) A purified compound identified by the method of claim 1.
11. (Withdrawn) A compound identified by the method of claim 1, wherein said compound is selected from the group of compounds, analogs, or derivatives thereof, consisting of:



CODE NAME: 89246

Specs Name: AG-690/40701421

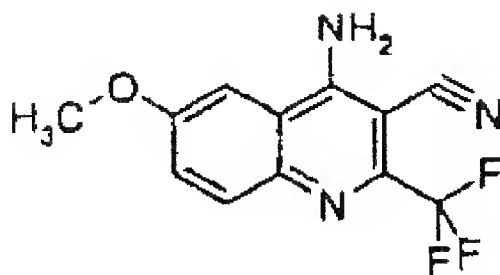
Chemical Name: 7-methoxy-1H-pyrazolo[3,4-b]quinolin-3-ylamine,



CODE NAME: 91161

Specs Name: AP-501/40888738

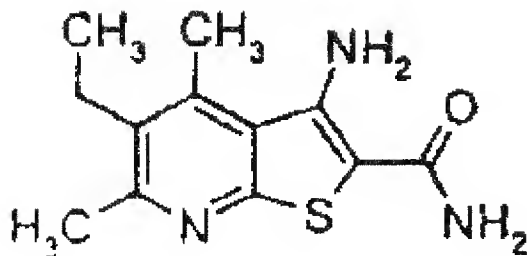
Chemical Name: 2-chloro-N-(4-methylphenyl)-4-(trifluoromethyl)-1,3-thiazole-5-carboxamide,



CODE NAME: 104366

Specs Name: AG-687/25019010

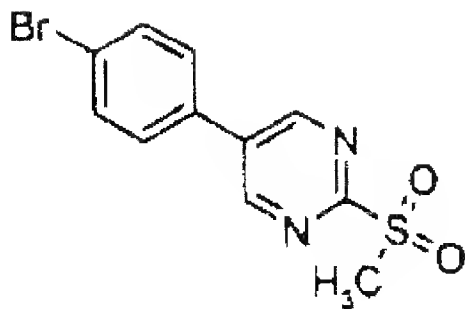
Chemical Name: 4-amino-6-methoxy-2-(trifluoromethyl)-3-quinolinecarbonitrile,



CODE NAME: 103833

Specs Name: AE-848/34435011

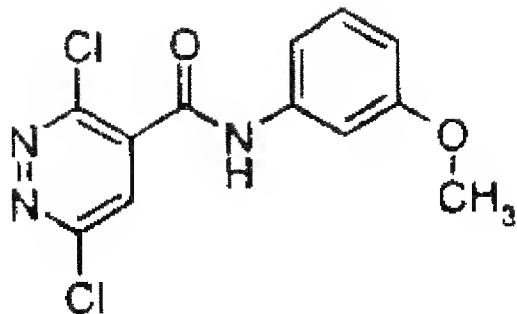
Chemical Name: 3-amino-5-ethyl-4,6-dimethylthieno[2,3-b]pyridine-2-carboxamide,



CODE NAME: 107129

Specs Name: AC-907/25005415

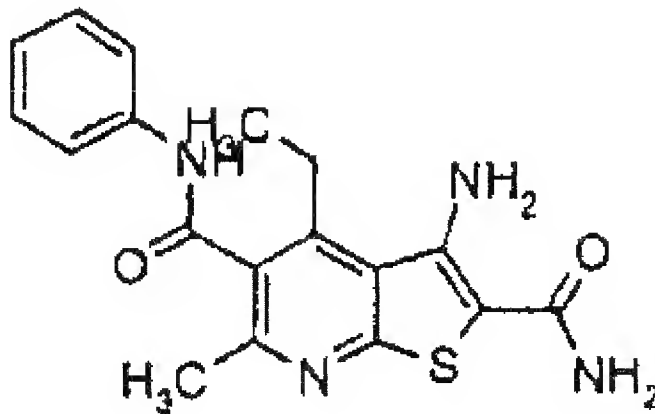
Chemical Name: -(4-bromophenyl)-2-(methylsulfonyl)pyrimidine,



CODE NAME: 107740

Specs Name: AF-399/40653810

Chemical Name: 3,6-dichloro-N-(3-methoxyphenyl)-4-pyridazinecarboxamide,

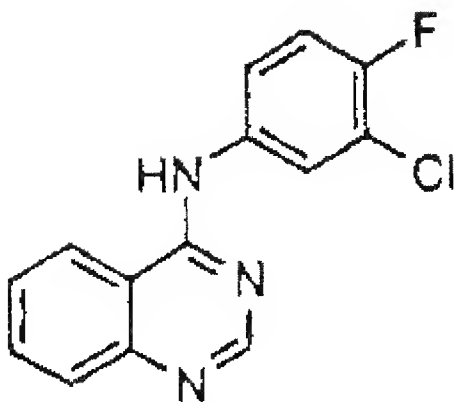


CODE NAME: 75168

Specs Name: AE-848/34435026

Chemical Name: 3-amino-4-ethyl-6-methyl-N-phenylthieno[2,3-b]pyridine-2,5-dicarboxamide,

and



CODE NAME: 109020

Specs Name: AP-906/41641102

Chemical Name: N-(3-chloro-4-fluorophenyl)-N-(4-quinazolinyl)amine.

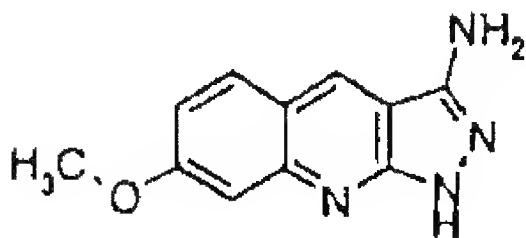
12. (Withdrawn) A pharmaceutical composition comprising at least one compound identified by the method of claim 1 and a pharmaceutically-acceptable carrier.
13. (Withdrawn) A pharmaceutical composition comprising at least one compound of claim 11 and a pharmaceutically-acceptable carrier
14. (Original) A method of administering a compound identified by the method of claim 1 to a subject, said method comprising administering a pharmaceutical composition comprising a compound identified by the method of claim 1 to said subject.
15. (Original) A method of administering a compound of claim 10 to a subject, said method comprising administering a pharmaceutical composition comprising at least one compound of claim 11 and a pharmaceutically-acceptable carrier to said subject.
16. (Original) A method of treating an HIV-infected subject in need of such treatment, comprising administering to said subject a pharmaceutical composition comprising an effective amount of at least one compound, analog, or derivative thereof identified by the method of claim 1 and a pharmaceutically-acceptable carrier, such that HIV replication is inhibited.
17. (Original) The method of claim 16, wherein said compound is administered via a route selected from the group consisting of topical, oral, rectal, vaginal, intramuscular, and intravenous.
18. (Original) The method of claim 17, wherein said compound is administered via an oral route.
19. (Original) A method of treating an HIV-infected subject in need of such treatment, comprising administering to said subject a pharmaceutical composition comprising an effective

amount of at least one compound, analog, or derivative thereof of claim 11, and a pharmaceutically-acceptable carrier, such that HIV replication is inhibited.

20. (Withdrawn) A kit for identifying a compound which inhibits HIV replication, said kit comprising a cell wherein HIV virion production is dependent on Rev protein expression in said cell, and a cell wherein HIV virion production is independent of Rev protein expression, a standard compound, an applicator, and an instructional material for the use thereof.

21-24 (Canceled)

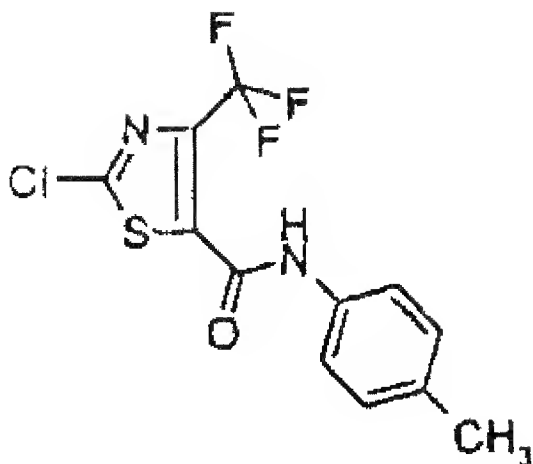
25. (Previously Presented) A method of treating an HIV-infected subject in need of such treatment, said method comprising administering to said subject a pharmaceutical composition comprising an effective amount of at least one compound, or analog or derivative thereof, selected from the group consisting of:



CODE NAME: 89246

Specs Name: AG-690/40701421

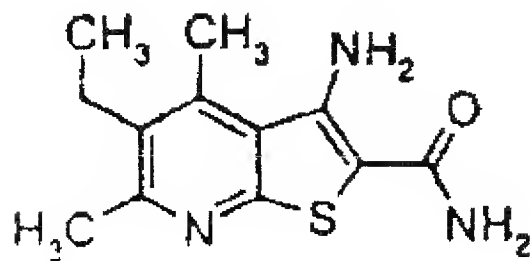
Chemical Name: 7-methoxy-1H-pyrazolo[3,4-b]quinolin-3-ylamine,



CODE NAME: 91161

Specs Name: AP-501/40888738

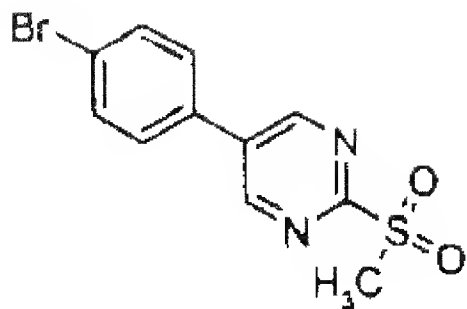
Chemical Name: 2-chloro-N-(4-methylphenyl)-4-(trifluoromethyl)-1,3-thiazole-5-carboxamide,



CODE NAME: 103833

Specs Name: AE-848/34435011

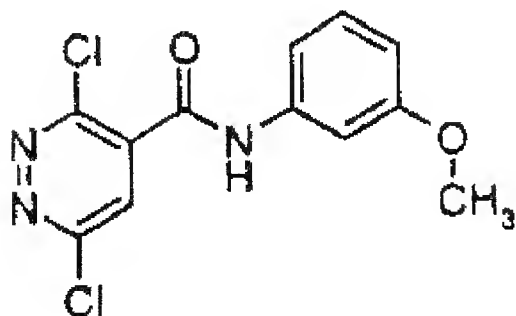
Chemical Name: 3-amino-5-ethyl-4,6-dimethylthieno[2,3-b]pyridine-2-carboxamide,



CODE NAME: 107129

Specs Name: AC-907/25005415

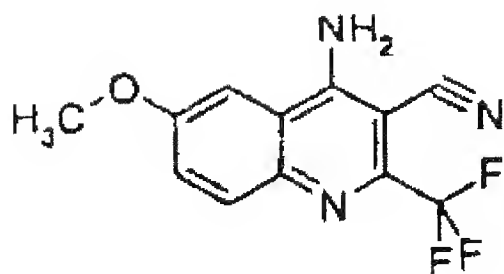
Chemical Name: -(4-bromophenyl)-2-(methylsulfonyl)pyrimidine,



CODE NAME: 107740

Specs Name: AF-399/40653810

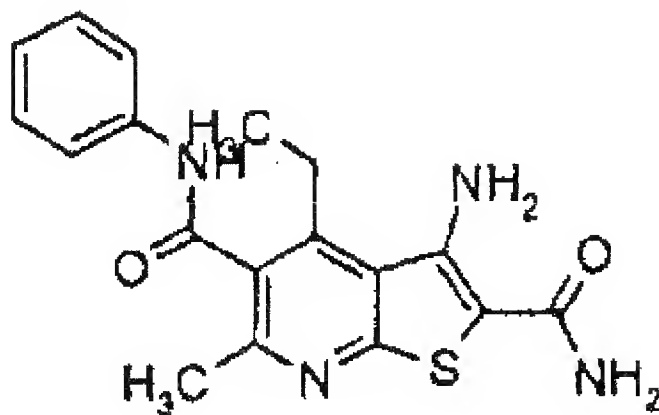
Chemical Name: 3,6-dichloro-N-(3-methoxyphenyl)-4-pyridazinecarboxamide,



CODE NAME: 104366

Specs Name: AG-687/25019010

Chemical Name: 4-amino-6-methoxy-2-(trifluoromethyl)-3-quinolinecarbonitrile,

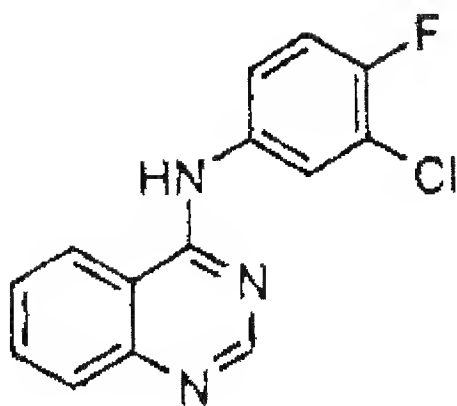


CODE NAME: 75168

Specs Name: AE-848/34435026

Chemical Name: 3-amino-4-ethyl-6-methyl-N-phenylphenylthieno[2,3-b]pyridine-2,5-dicarboxamide,

and

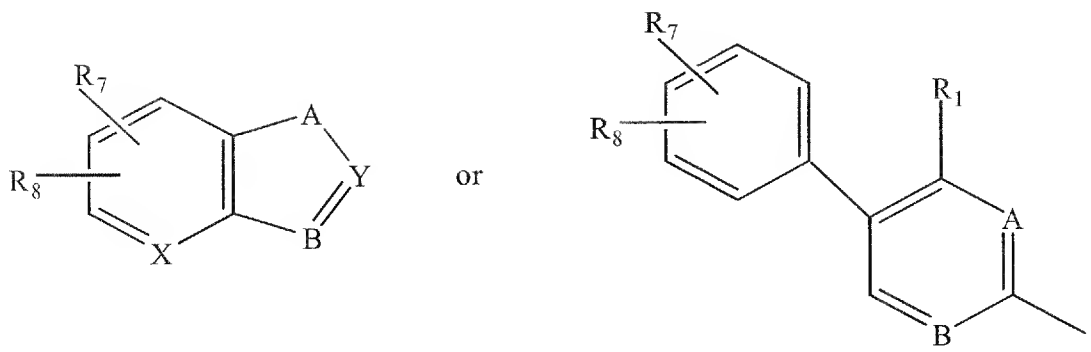


CODE NAME: 109020

Specs Name: AP-906/41641102

Chemical Name: N-(3-chloro-4-fluorophenyl)-N-(4-quinazolinyl)amine.

Claim 26. (New) The method of claim 19, wherein the compound has the general structure:



wherein

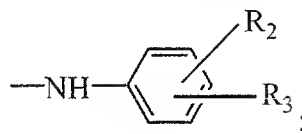
A is selected from the group consisting of N, CR₁, and $\begin{array}{c} \text{R}_{12} \\ | \\ \text{---CHN---} \end{array}$;

B is selected from the group consisting of N and S;

Y is selected from the group consisting of Sc, CH and CR₄;

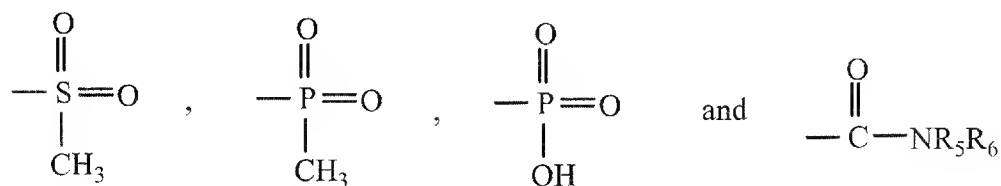
X is selected from the group consisting of CH and N;

R₁ is selected from the group consisting of H, NR₅R₆ and



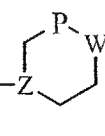
R₂ and R₃ are independently selected from the group consisting of H, halo, hydroxy and C₁-C₄ alkyl;

R₄ is selected from the group consisting of H, halo, hydroxy and C₁-C₄ alkyl;



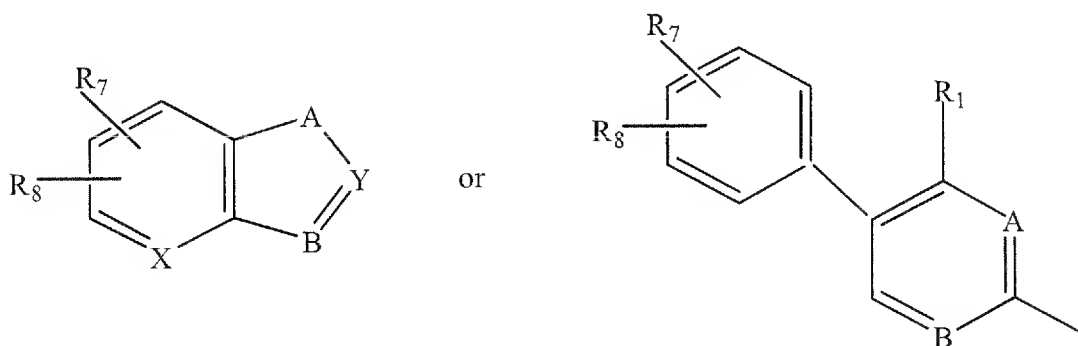
R₅ and R₆ are independently selected from the group consisting of H and C₁-C₄ alkyl;

R₇ and R₈ are independently selected from the group consisting of H, halo, hydroxy, C₁-C₄ alkyl, C₁-C₄ alkoxy, -NHC(O)CH₃ and -O(C₁-C₄ alkyl)(C₅-C₆ heterocyclic) or R₇ and R₈ together with the atoms to which they are attached form an optionally substituted C₅-C₆ aryl, wherein the aryl ring is optionally substituted with halo, C₁-C₄ alkyl, C₁-C₄ alkoxy, C₁-C₄ alkyl(C₅-C₆ aryl) and -O(C₁-C₄ alkyl)(C₅-C₆ heterocyclic). In one embodiment Y is CR₄, R₇ is H or C₁-C₄ alkoxy, R₈ is halo or

$\text{—O(CH}_2\text{)}_n\text{—Z}$ , wherein n is an integer ranging from 1-5, and P, W and Z are independently selected from the group consisting of O, S, CH₂ and NH.

Claim 27. (New) A method of inhibiting HIV replication, said method comprising contacting a cell comprising HIV with an effective amount of a compound identified by the method of claim 1, thereby inhibiting HIV replication.

Claim 28. (New) The method of claim 27, wherein said compound has the structure:



wherein

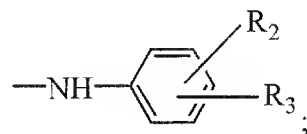
A is selected from the group consisting of N, CR₁, and $\text{—}\overset{\text{R}_1}{\underset{|}{\text{CHN}}}\text{—}$;

B is selected from the group consisting of N and S;

Y is selected from the group consisting of Se, CH and CR₄;

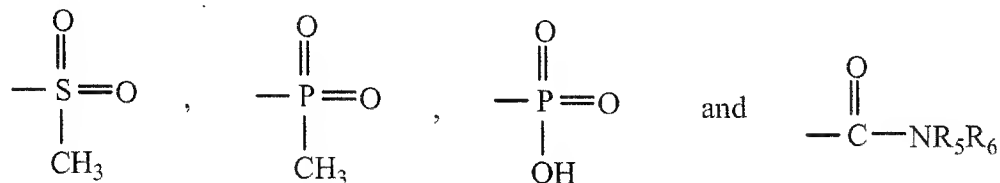
X is selected from the group consisting of CH and N;

R₁ is selected from the group consisting of H, NR₅R₆ and



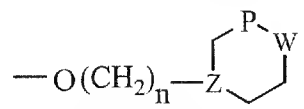
R₂ and R₃ are independently selected from the group consisting of H, halo, hydroxy and C₁-C₄ alkyl;

R₄ is selected from the group consisting of H, halo, hydroxy and C₁-C₄ alkyl;



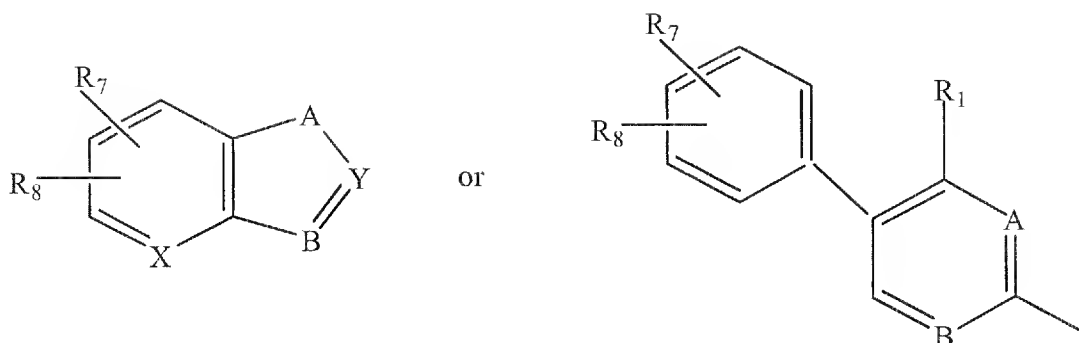
R₅ and R₆ are independently selected from the group consisting of H and C₁-C₄ alkyl;

R₇ and R₈ are independently selected from the group consisting of H, halo, hydroxy, C₁-C₄ alkyl, C₁-C₄ alkoxy, -NHC(O)CH₃ and -O(C₁-C₄ alkyl)(C₅-C₆ heterocyclic) or R₇ and R₈ together with the atoms to which they are attached form an optionally substituted C₅-C₆ aryl, wherein the aryl ring is optionally substituted with halo, C₁-C₄ alkyl, C₁-C₄ alkoxy, C₁-C₄ alkyl(C₅-C₆ aryl) and -O(C₁-C₄ alkyl)(C₅-C₆ heterocyclic). In one embodiment Y is CR₄, R₇ is H or C₁-C₄ alkoxy, R₈ is halo or



, wherein n is an integer ranging from 1-5, and P, W and Z are independently selected from the group consisting of O, S, CH₂ and NH.

Claim 29. (New) A method of inhibiting HIV replication, said method comprising contacting a cell comprising HIV with an effective amount of a compound having the structure:



wherein

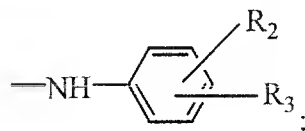
A is selected from the group consisting of N, CR₁, and ---CHN--- ;

B is selected from the group consisting of N and S;

Y is selected from the group consisting of Se, CH and CR₄;

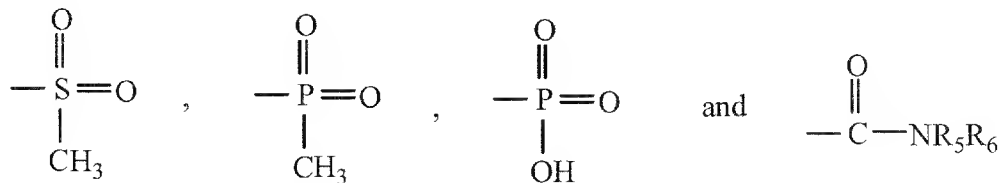
X is selected from the group consisting of CH and N;

R₁ is selected from the group consisting of H, NR₅R₆ and



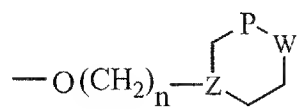
R₂ and R₃ are independently selected from the group consisting of H, halo, hydroxy and C₁-C₄ alkyl;

R₄ is selected from the group consisting of H, halo, hydroxy and C₁-C₄ alkyl;



R₅ and R₆ are independently selected from the group consisting of H and C₁-C₄ alkyl;

R₇ and R₈ are independently selected from the group consisting of H, halo, hydroxy, C₁-C₄ alkyl, C₁-C₄ alkoxy, -NHC(O)CH₃ and -O(C₁-C₄ alkyl)(C₅-C₆ heterocyclic) or R₇ and R₈ together with the atoms to which they are attached form an optionally substituted C₅-C₆ aryl, wherein the aryl ring is optionally substituted with halo, C₁-C₄ alkyl, C₁-C₄ alkoxy, C₁-C₄ alkyl(C₅-C₆ aryl) and -O(C₁-C₄ alkyl)(C₅-C₆ heterocyclic). In one embodiment Y is CR₄, R₇ is H or C₁-C₄ alkoxy, R₈ is halo or

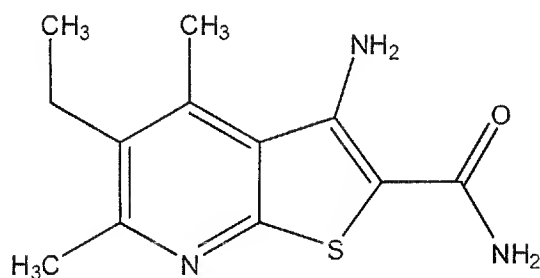


, wherein n is an integer ranging from 1-5, and P, W and Z are independently selected from the group consisting of O, S, CH₂ and NH.

30. (New) The method of claim 29, wherein said compound inhibits REV function.

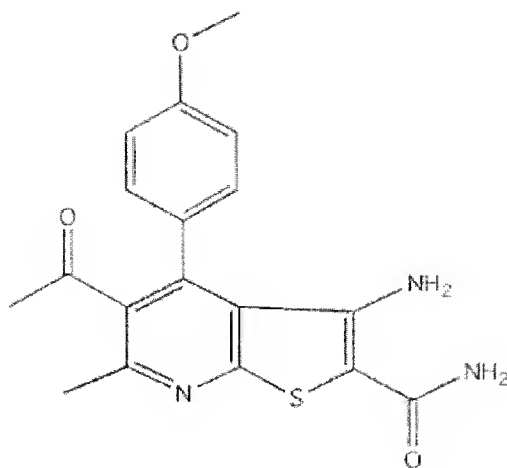
31. (New) The method of claim 29, wherein said compound is selected from the group consisting of

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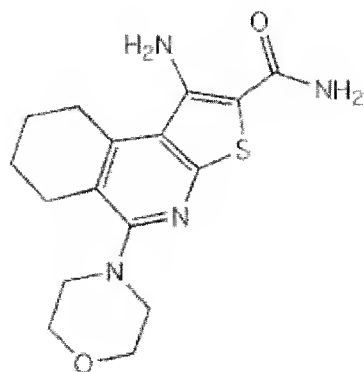


3-amino-5-ethyl-4,6-dimethylthieno[2,3-b]pyridine-2-carboxamide,

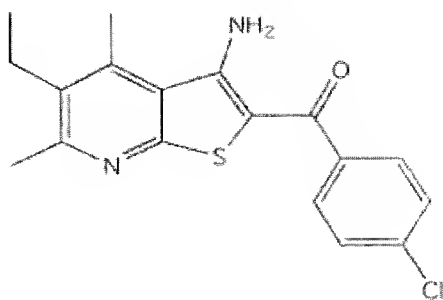
AE-641/15124054 (311)



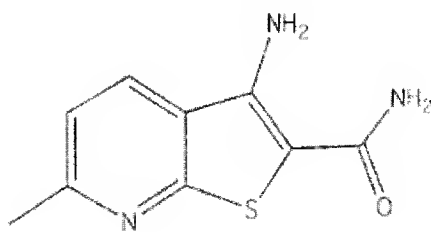
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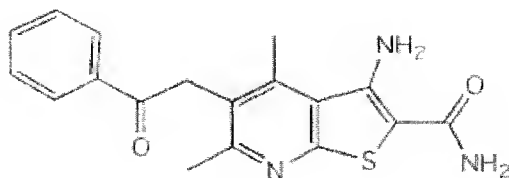
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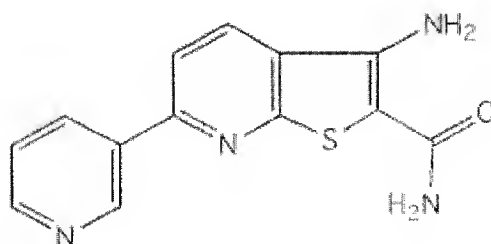
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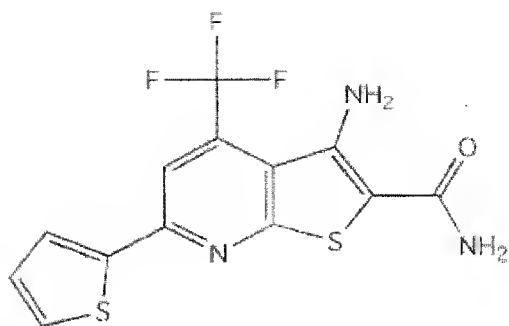
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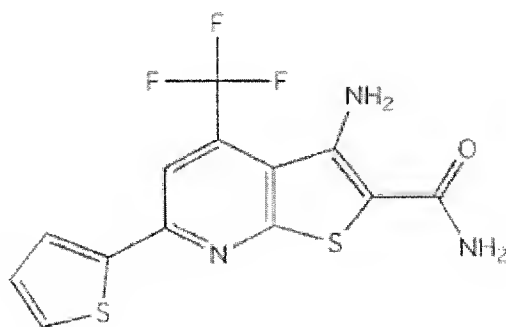
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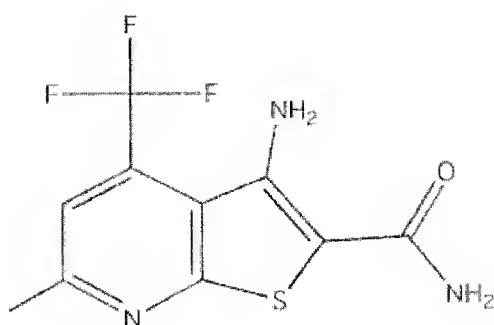
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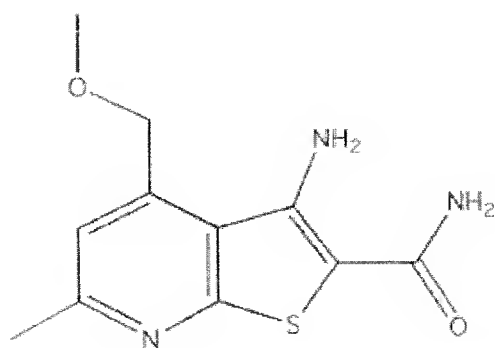
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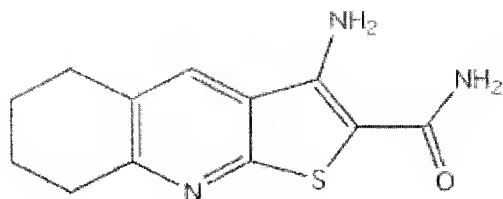
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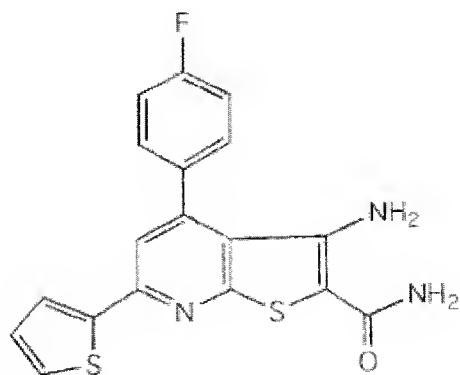
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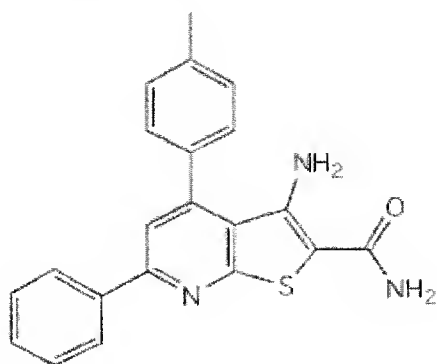
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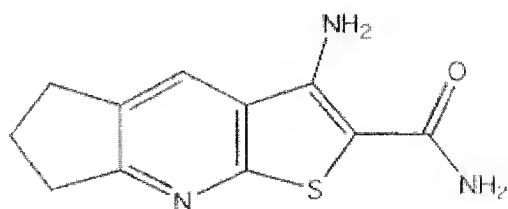
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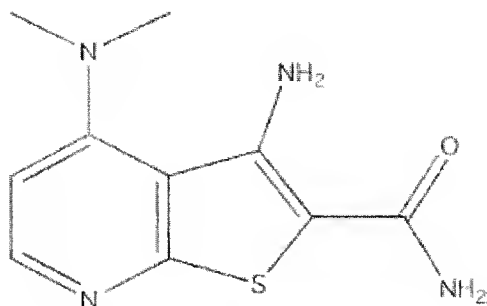
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AG-690/34037018 (324)

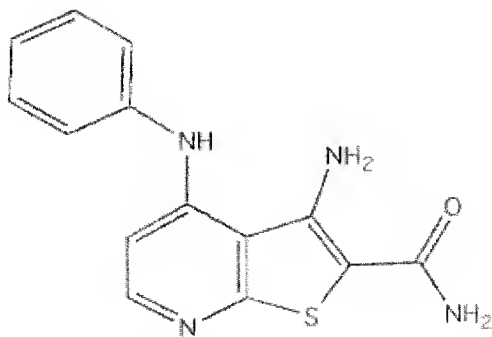


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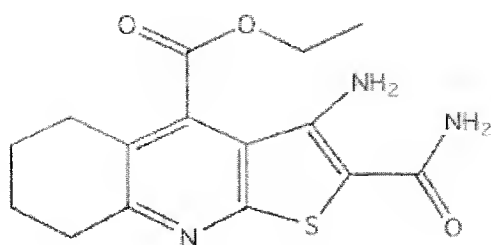
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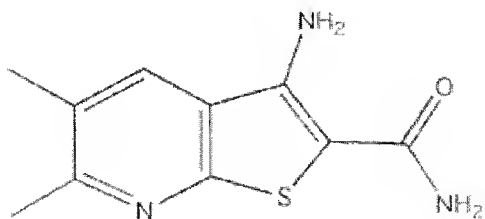


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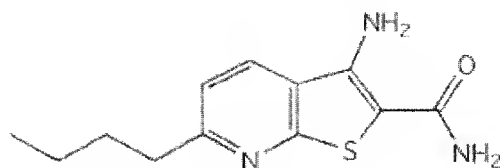
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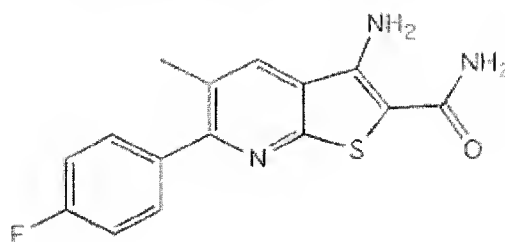
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AK-968/37156085 (329)

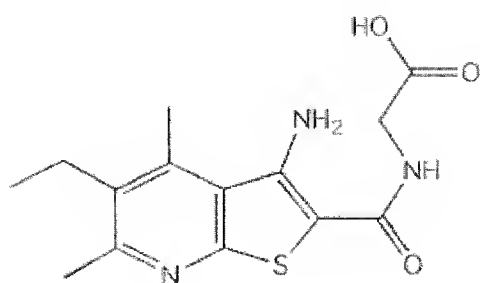


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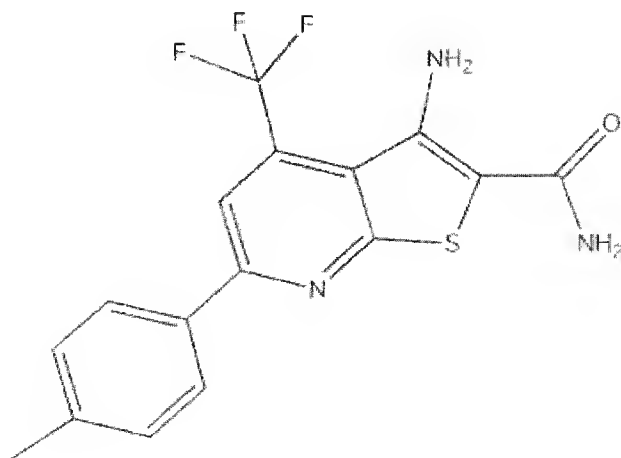
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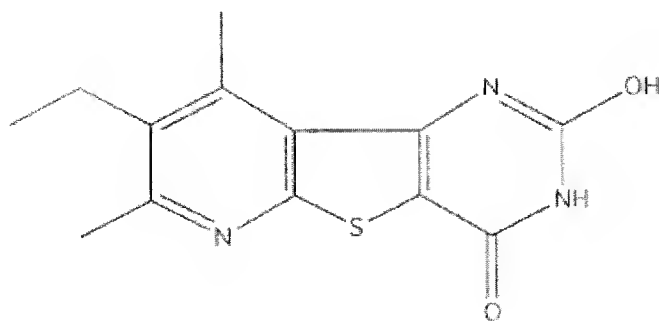


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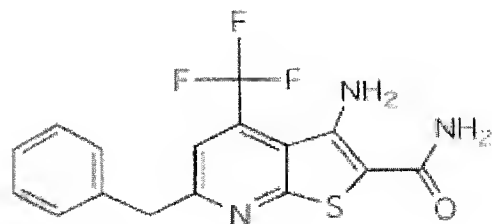
(332)



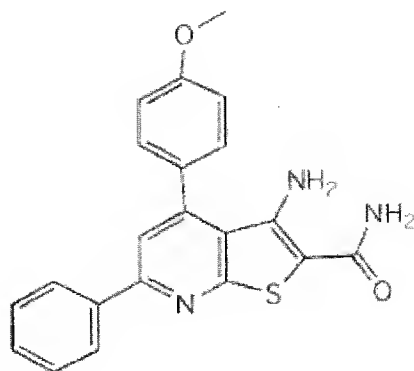
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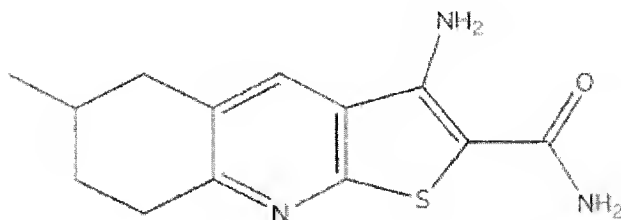
AM-807/42860050 (334)



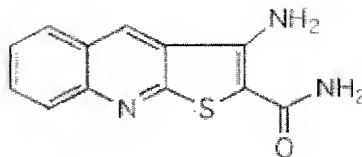
AN-329/05740035 (335)



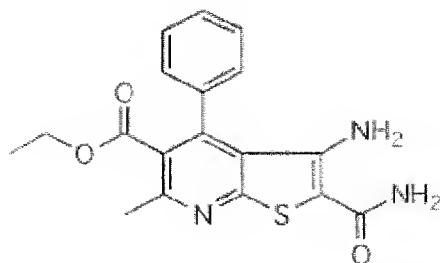
AN-919/14791006 (336)



AO-799/42008042 (337)



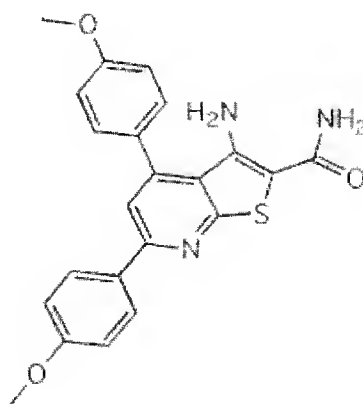
AO-799/43115183 (338)



and

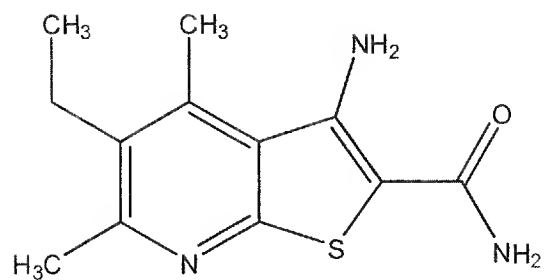
(339)

AQ-750/42052143



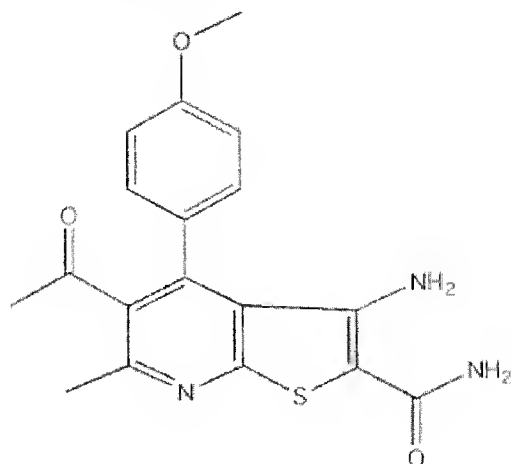
32. (New) The method of claim 26, wherein said compound is selected from the group consisting of

103833



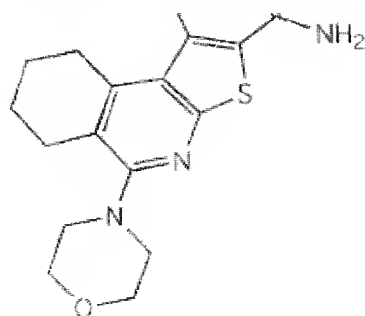
3-amino-5-ethyl-4,6-dimethylthieno[2,3-b]pyridine-2-carboxamide ,

AE-641/15124054 (311)

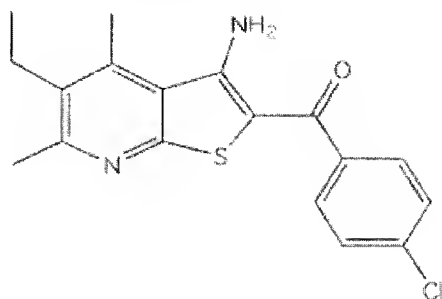


(312)

AE-848/11105217

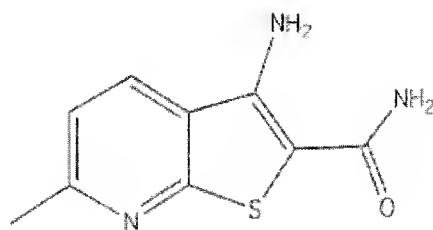


AE-848/34405027 (313)

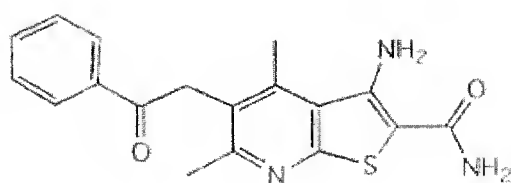


(314)

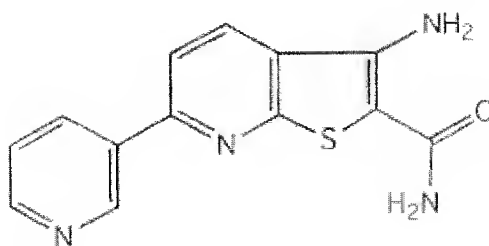
AG-205/08592044



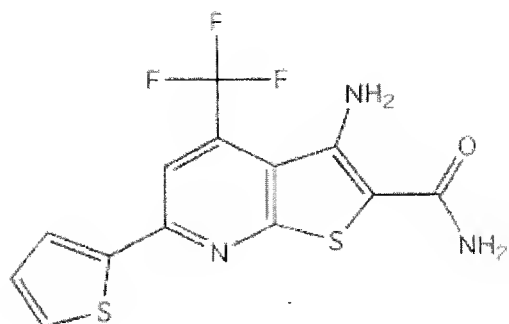
AG-205/11781740 (315)



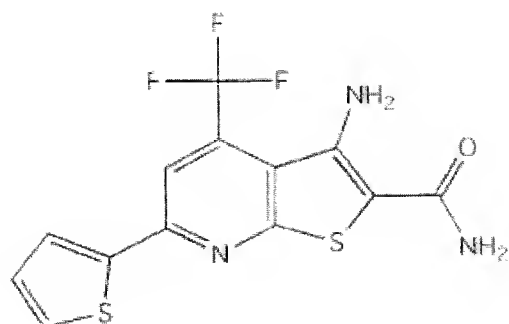
AG-205/31312022 (316)



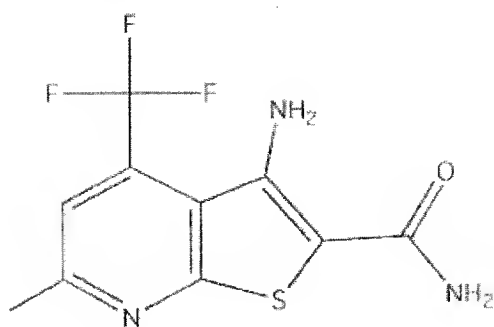
AG-205/33137032 (317)



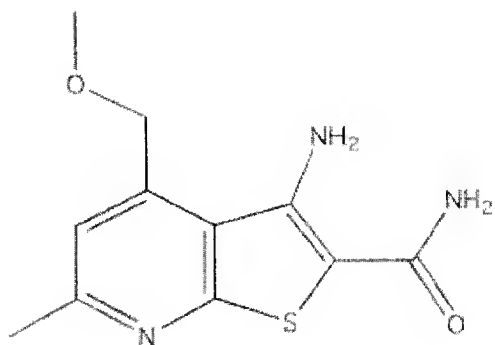
AG-205/33137032 (318)



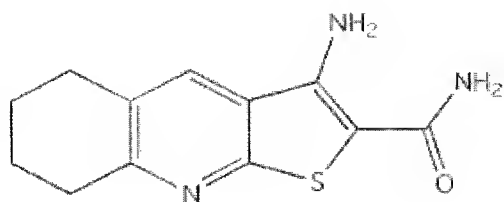
AG-205/33139015 (319)



AG-205/33156001 (320)

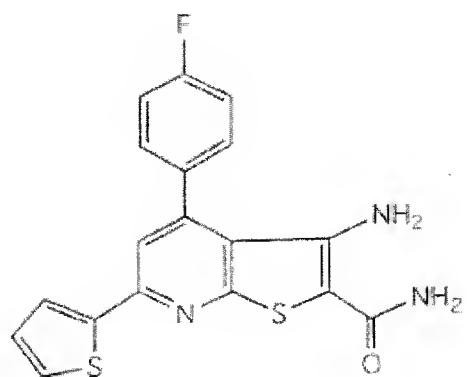


AG-205/33684025 (321)

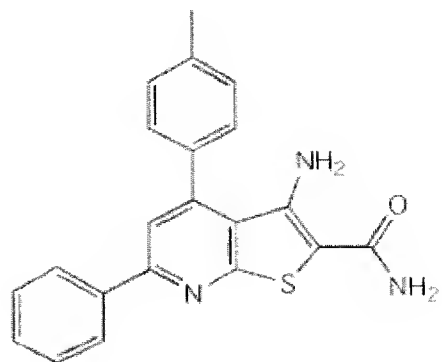


AG-205/36992106

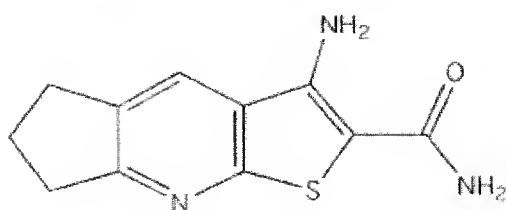
(322)



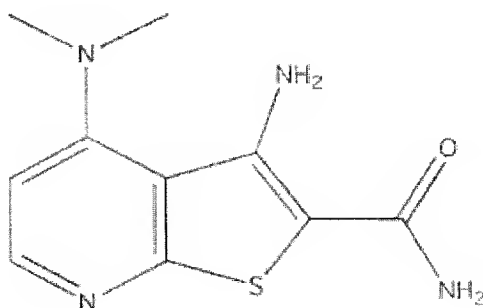
AG-690/1370414 (323)



AG-690/34037018 (324)

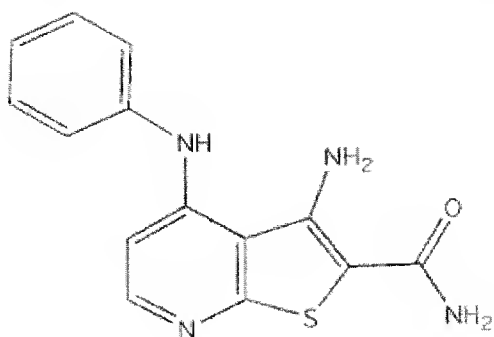


AH-262/34335029 (325)

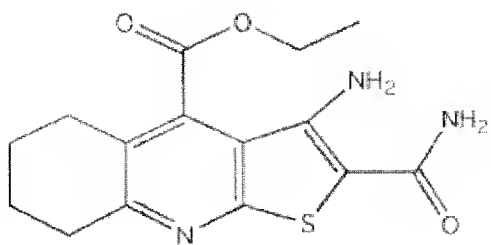


AH-262/36083007

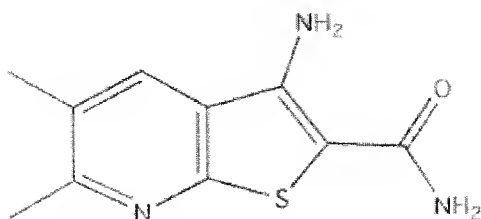
(326)



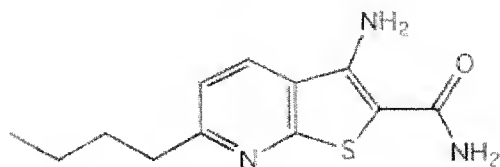
AK-777/115000 (327)



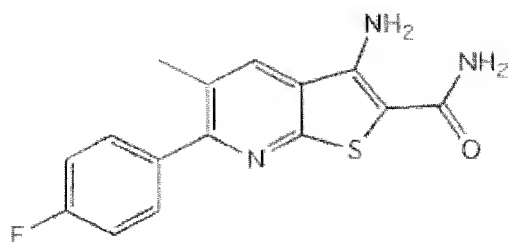
AK-777/36935027 (328)



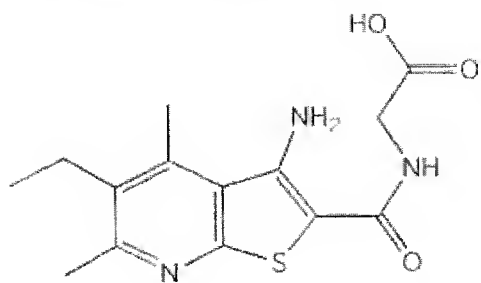
AK-968/37156085 (329)



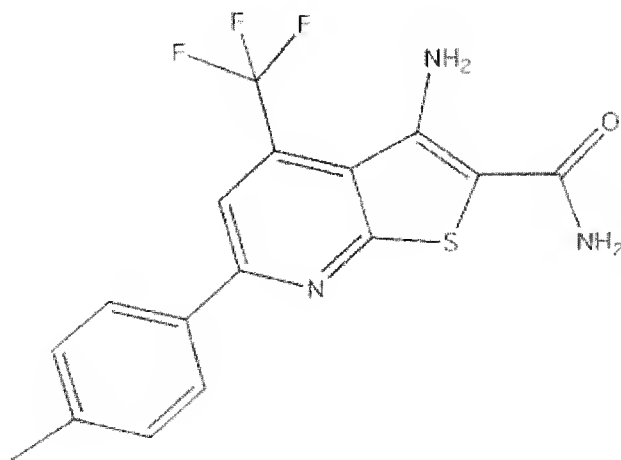
AM-807/12740245 (330)



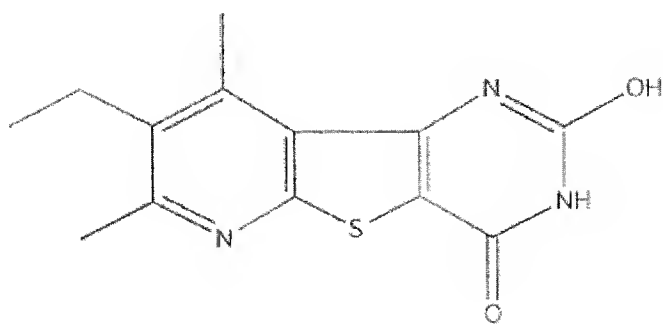
AM-807/13614287 (331)



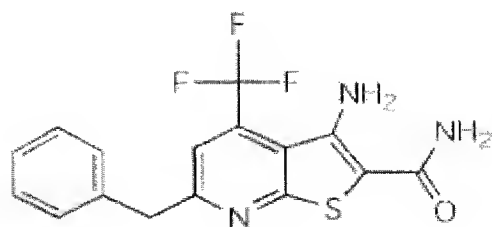
AM-807/1414790 (332)



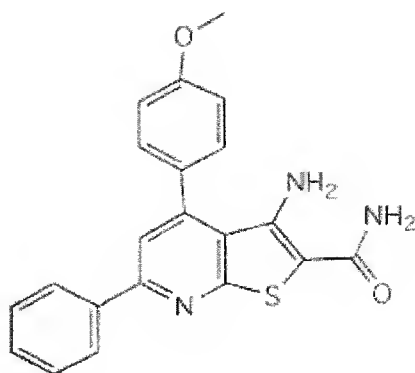
AM-807/4200402 (333)



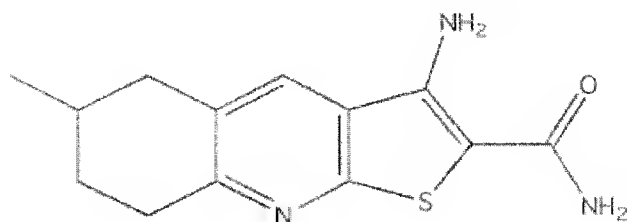
AM-807/42860050 (334)



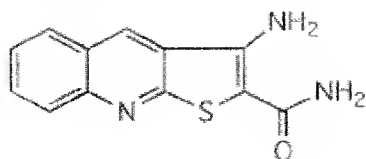
AN-329/05740035 (335)



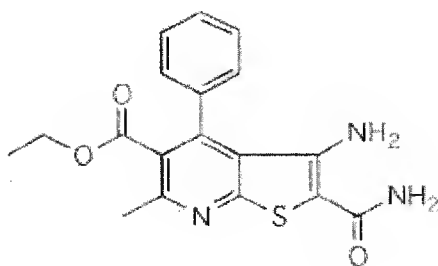
AN-919/14791006 (336)



AO-799/42008042 (337)

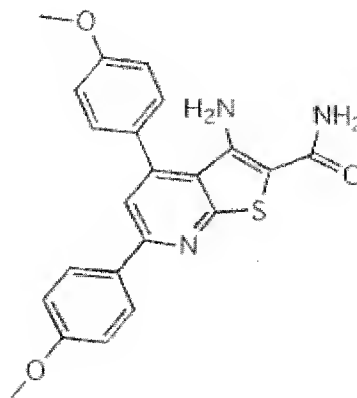


AO-799/43115183 (338)



and

AQ-750/42052143 (339)



Claim 33. (New) The method of claim 27, wherein HIV virion production is dependent on Rev protein expression.

Claim 34. (New) The method of claim 29, wherein HIV virion production is dependent on Rev protein expression.